AQUITANIA

2

W/S 550

J. BROWN & Co

No. 409.

PROFILE

"AQUITANIA"

GLS 34050

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LR.PRF.TL18.P.5

10

J. Brown & Co

No 409

B. Deck

S/S "Aquitania."

GLASGOW REPORT No. 34050.

Box 408

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m/m

Greenwich

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19.5.11

BRIDGE DECK "B"

ARRANGEMENT OF STIFFENING AT BREAK
WILL BE SUBMITTED LATER

~~LARGE~~ DECK OPENINGS TO HAVE ROUNDED CORNERS
WITH STRONG WELDED ANGLES.

ATLANTIC LINER Nº 409

BRIDGE DECK "B"

SCALE $\frac{1}{8}$" INCH = 1 FOOT

JOHN BROWN & COMPANY LIMITED
SHIPBUILDING DEPARTMENT
No. 2071
EXD BY JP
DATE 1 MAY. 1911
CLYDEBANK

DOUBLE THICKNESS
SINGLE THICKNESS
GIRDER UNDER
CARGO HATCH
VENT
BATH
W.C.
LIFT
FUNNEL HATCH
LADIES LAVATORY
ENGINE HATCH
LINE OF HOUSE
LINE OF BEAM
SKYLIGHT
STAIRWAY
BULB TEE BEAMS 8" × 5" × 20.4 LBS
CHANNEL BEAMS 10" × 4" × 4" × $\frac{10}{20}$" WEB & $\frac{23}{40}$" FLANGES
CHANNEL BEAMS 10" × 4" × 4" × $\frac{10}{20}$" WEB & $\frac{23}{40}$" FLANGES
CHANNEL BEAMS 10" × 4" × 4" × $\frac{10}{20}$" WEB & $\frac{23}{40}$" FLANGES
CHANNEL BEAMS 10" × 4" × 4" × $\frac{10}{20}$" WEB & $\frac{23}{40}$" FLANGE

B.
15.5.11

14

J. Brown & Co
No 409
E & F Decks

S. "Aquitania."

GLASGOW REPORT No: 34050.

LLOYDS REGISTER OF SHIPPING
RECEIVED
2 - MAY. 1914
LONDON.

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LR-FAF-T818-P-L0

15

J. Brown & Co
No 409
G & H Decks
Sp "Aquitania."

GLASGOW REPORT No: 34050.

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Foundation

LR-FAF-T818-P-11

No. 4

ARMSTRONG, WHITWORTH & Co. LTD. (NAVAL YARD)

PROFILE AND "G" DECK.

S/S "AQUITANIA"

S.S. "AQUITANIA"

NEWCASTLE ON TYNE.

Report No. 43256.

W/P 550

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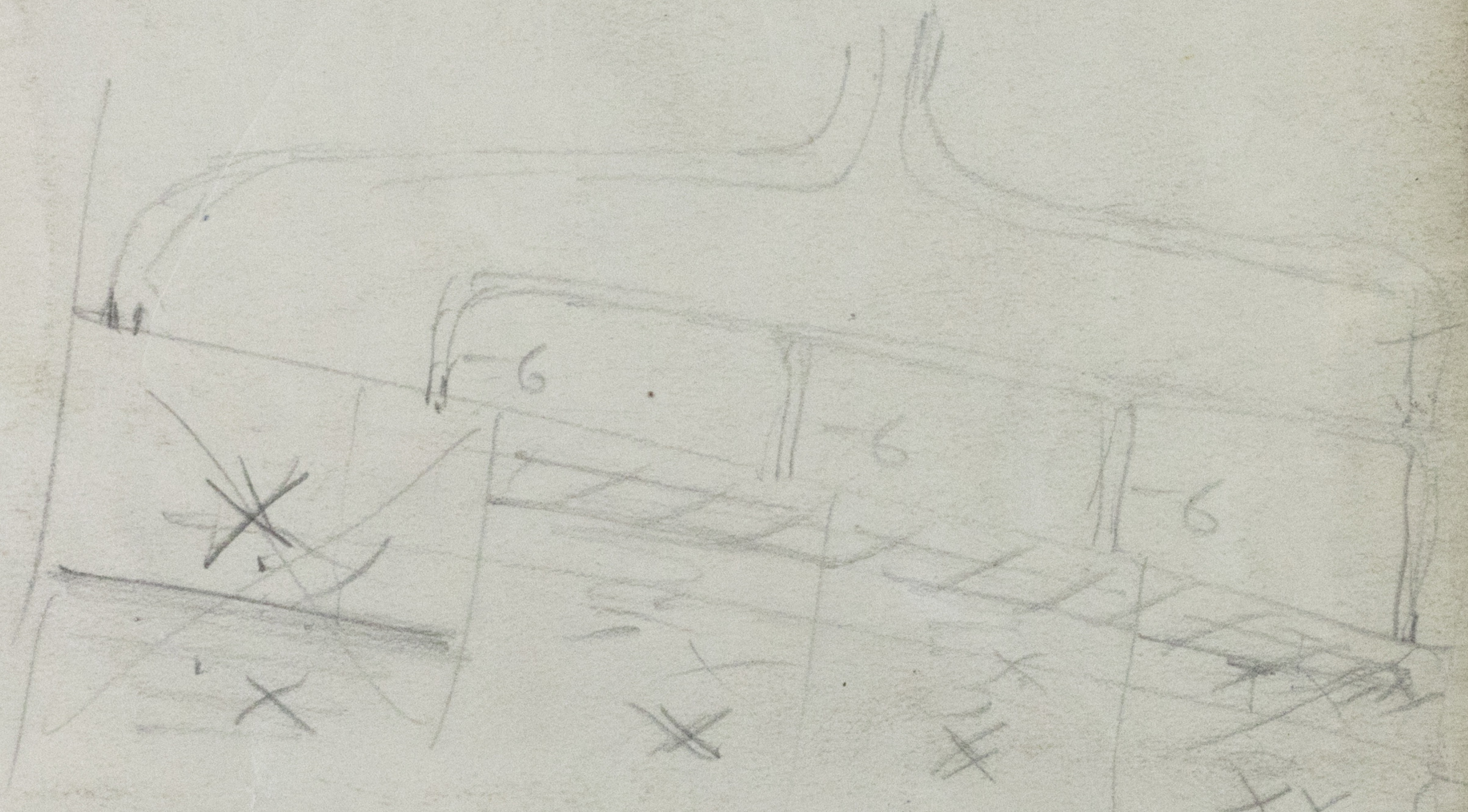
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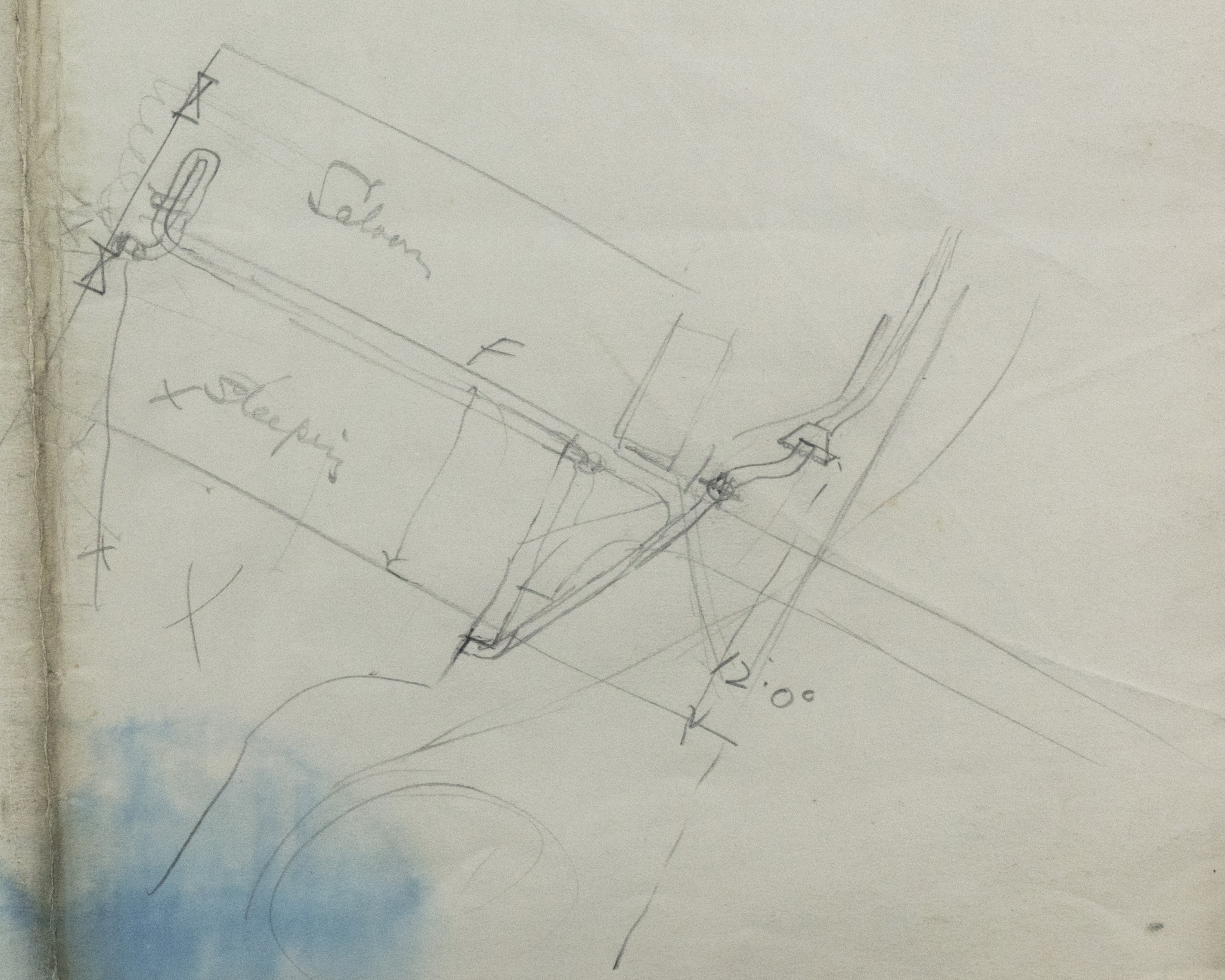
Saloon
F
Sleeping
12'0"

R.M.S. "AQUITANIA".

PROFILE & "G" DECK.

SCALE 1/8" 1 FOOT.

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J Brown & Co's

No 409

Main & Lower deck Sl

London Office Copy

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appd 18.5.11.

Plan No 7.

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Orlop & Lower Orl

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J Brown & Co's

No 409

London office Copy

18.5.11.

Plan No 8

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LR-FAF-T318-P-16

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J. BROWN & Co

No. 409.

MIDSHIP SECTION

"AQUITANIA"

GLS 34050

PLAN. No. 1.

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LR-FAF-T840-Y-3

Lloyd's Glasgow Office

1·2·12.

Nº 409

MIDSHIP SECTION

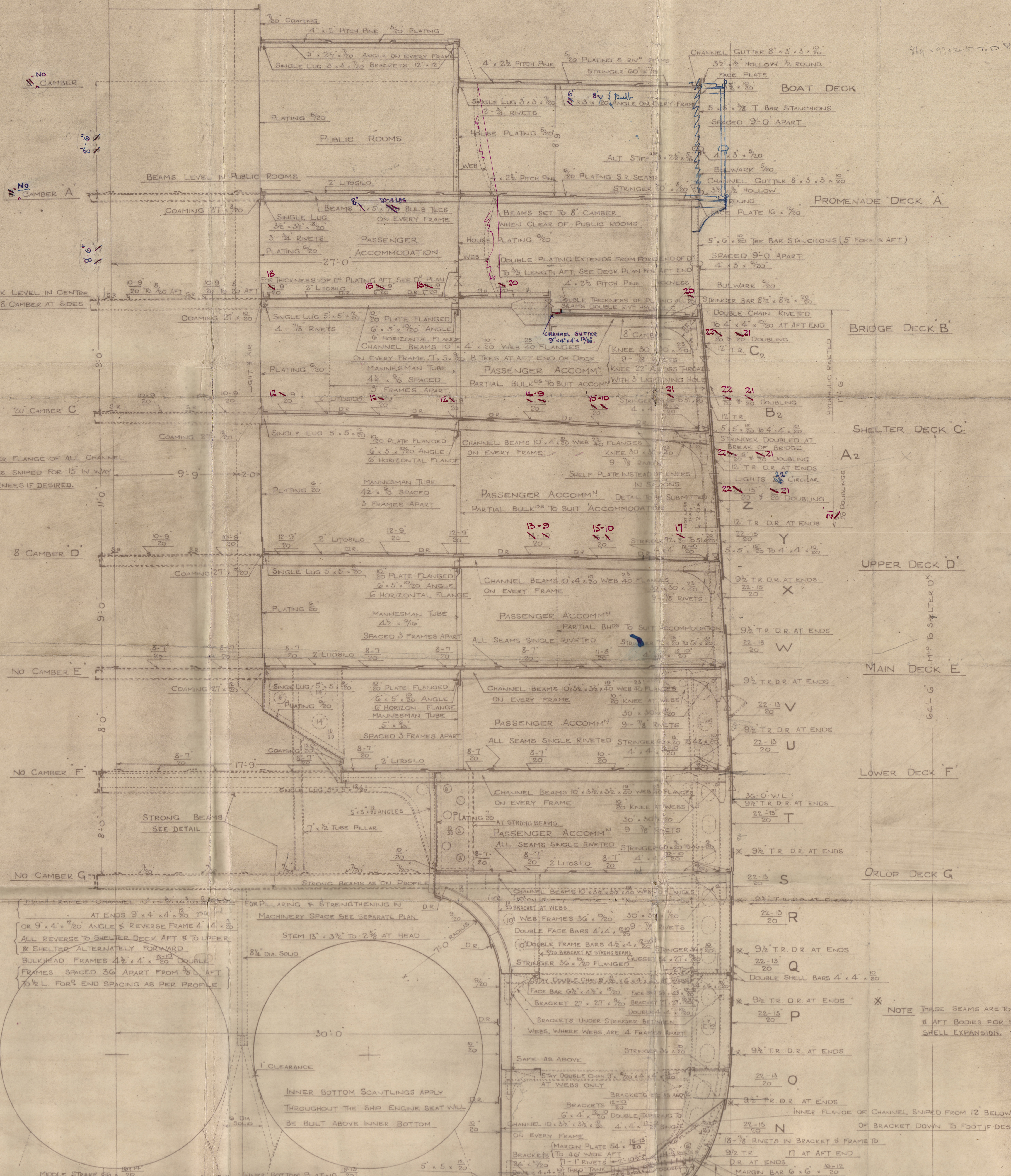
SCALE 1/4" = 1 FOOT

JOHN BROWN & COMPANY, LIMITED
SHIPBUILDING DEPARTMENT
Nº 26526
EXD BY
DATE JAN 1912
CLYDEBANK

SHEWING PROPOSED REDUCTION IN SCANTLINGS OF TOPSIDE DOUBLE PLATING, AND PLATING OF "B." "C." AND "D" DECKS.

NOTE:- THE SIZES OF RIVETS, BREADTHS OF LAPS, STRAPS AND LANDINGS WILL BE IN ACCORDANCE WITH THE RULES FOR THE REDUCED THICKNESS OF THE PLATING.

Sketches of superstructures shewing webs &c. to be submitted.


7/20" COAMING
4" x 2" PITCH PINE 5/20 PLATING
5" x 2½" x 7/20 ANGLE ON EVERY FRAME
SINGLE LUG 3" x 3" x 7/20 BRACKETS 12" x 12"
No CAMBER
PLATING 5/20
PUBLIC ROOMS
4" x 2½" PITCH PINE
5/20 PLATING & RIVD SEAMS
STRINGER 60" x 7/20
CHANNEL GUTTER 8" x 3" x 3" x 10/20
3½" x ½" HOLLOW ½ ROUND
FACE PLATE
BOAT DECK
SINGLE LUG 3" x 3" x 7/20
2 - ¾" RIVETS
8" x 3" x 7/20 Bulb ANGLE ON EVERY FRAME
5" x 5" x 3/8" T. BAR STANCHIONS
SPACED 9'-0" APART
HOUSE PLATING 5/20
8'-6"
WEB
ALT. STIFFRS 3" x 2½" x 5/16
4" x 3" x 5/20
BULWARK 5/20
BEAMS LEVEL IN PUBLIC ROOMS
2" LITOSILO
4" x 2½" PITCH PINE
6/20 PLATING S.R. SEAMS
STRINGER 60" x 8/20
CHANNEL GUTTER 8" x 3" x 3" x 10/20
3½" x ½" HOLLOW ½ ROUND
No CAMBER "A"
PROMENADE DECK "A"
COAMING 27" x 8/20
BEAMS 8" x 5" x 20·4 LBS BULB TEES ON EVERY FRAME
SINGLE LUG 3½" x 3½" x 8/20
3 - ¾" RIVETS
PLATING 6/20
PASSENGER ACCOMMODATION
BEAMS SET TO 8" CAMBER WHEN CLEAR OF PUBLIC ROOMS
HOUSE PLATING 6/20
FACE PLATE 16" x 12/20
5" x 6" x 10/20 TEE BAR STANCHIONS (5" FORE & AFT)
SPACED 9'-0" APART
4" x 3" x 6/20
27'-0"
DOUBLE PLATING EXTENDS FROM FORE END OF DK TO 3/5 LENGTH AFT. SEE DECK PLAN FOR AFT END
FOR THICKNESS OF DK PLATING AFT SEE DK PLAN
4" x 2½" PITCH PINE THICKNESS
BULWARK 6/20
"B" DECK LEVEL IN CENTRE WITH 8" CAMBER AT SIDES
10-9/20 TO 8/20 AFT
2" LITOSILO
DOUBLE THICKNESS OF PLATING ALL SEAMS DOUBLE RIVD HYDRAULIC
STRINGER BAR 8½" x 8½" x 20/20
DOUBLE CHAIN RIVETED TO 4" x 4" x 10/20 AT AFT END
BRIDGE DECK "B"
COAMING 27" x 10/20
SINGLE LUG 5" x 5" x 12/20
4 - 7/8" RIVETS
10/20 PLATE FLANGED
6" x 5" x 10/20 ANGLE
6" HORIZONTAL FLANGE
CHANNEL GUTTER 9" x 4" x 4" x 13/20
CHANNEL BEAMS 10" x 4" x 10/20 WEB 23/40 FLANGES ON EVERY FRAME. 7" x 5" x 9/20 B. TEES AT AFT END OF DECK
8" CAMBER
KNEE 30" x 30" x 23/40
9 - 7/8" RIVETS
KNEE 22" ACROSS THROAT WITH 3" LIGHTENING HOLE
22/20 & 21/20 DOUBLING
12" T.R. C2
LIGHT & AIR
9'-0"
PLATING 6/20
MANNESMAN TUBE 4¼" x 6/16 SPACED 3 FRAMES APART
PASSENGER ACCOMMN
PARTIAL BULKDS TO SUIT ACCOMMN
HYDRAULIC RIVETED
17'-6"
20" CAMBER "C"
12'-9"/20
2" LITOSILO
22/20 & 21/20 DOUBLING
12" T.R. B2
5" x 5" x 15/20 TO 4" x 4" x 10/20
SHELTER DECK "C"
SINGLE LUG 5" x 5" x 12/20
10/20 PLATE FLANGED
6" x 5" x 10/20 ANGLE
CHANNEL BEAMS 10" x 4" x 10/20 WEB 23/40 FLANGES ON EVERY FRAME
KNEE 30" x 30" x 23/40
9 - 7/8" RIVETS
STRINGER DOUBLED AT BREAK OF BRIDGE
SHELF PLATE INSTEAD OF KNEES
LIGHTS 16" CIRCULAR
A2
NOTE - LOWER FLANGE OF ALL CHANNEL BEAMS SNIPED FOR 15" IN WAY OF KNEES IF DESIRED.
9'-9"
11'-0"
MANNESMAN TUBE 4¼" x 6/16 SPACED 3 FRAMES APART
PASSENGER ACCOMMN
PARTIAL BULKDS TO SUIT ACCOMMODATION
DETAIL TO BE SUBMITTED
22/20 & 21/20 DOUBLING
12" T.R. AT ENDS Z
8" CAMBER "D"
10-9/20
12-9/20
2" LITOSILO
13-9
15-10
17
5" x 5" x 15/20 TO 4" x 4" x 10/20 Y
UPPER DECK "D"
COAMING 27" x 8/20
SINGLE LUG 5" x 5" x 12/20
10/20 PLATE FLANGED
6" x 5" x 10/20 ANGLE
6" HORIZONTAL FLANGE
CHANNEL BEAMS 10" x 4" x 10/20 WEB 23/40 FLANGES ON EVERY FRAME
9 - 7/8" RIVETS
PLATING 8/20
MANNESMAN TUBE 4½" x 6/16 SPACED 3 FRAMES APART
PASSENGER ACCOMMN
PARTIAL BULKDS TO SUIT ACCOMMODATION
ALL SEAMS SINGLE RIVETED
9½" T.R. AT ENDS X
9½" T.R. D.R. AT ENDS W
64'-6" TO SHELTER DK
8'-7"/20
2" LITOSILO
11-8/20
NO CAMBER "E"
MAIN DECK "E"
COAMING
SINGLE LUG 5" x 5" x 12/20
10/20 PLATE FLANGED
6" x 5" x 10/20 ANGLE
6" HORIZON. FLANGE
MANNESMAN TUBE 5" x 6/16 SPACED 3 FRAMES APART
CHANNEL BEAMS 10" x 3½" x 3½" x 10/20 WEB 19/20 FLANGES ON EVERY FRAME
30" x 30" x 10/20 KNEE AT WEBS
9 - 7/8" RIVETS
PASSENGER ACCOMMN
ALL SEAMS SINGLE RIVETED
9½" T.R. D.R. AT ENDS V
9½" T.R. D.R. AT ENDS U
8'-0"
17'-9"
2" LITOSILO
NO CAMBER "F"
LOWER DECK "F"
CHANNEL BEAMS 10" x 3½" x 3½" x 10/20 WEB 19/20 FLANGES ON EVERY FRAME
30" x 30" KNEE AT WEBS
STRONG BEAMS SEE DETAIL
2 - 3" x 3" ANGLES
7" x ½" TUBE PILLAR
PLATING AT STRONG BEAMS
PASSENGER ACCOMMN
ALL SEAMS SINGLE RIVETED
36'-0" W.L.
T
9½" T.R. AT ENDS S
NO CAMBER "G"
ORLOP DECK "G"
STRONG BEAMS AS ON PROFILE
HOLD FRAMES CHANNEL 10" x 4" x 4" x 10/20 AT ENDS 9" x 4" x 4" x 9/20 OR 9" x 4" x 9/20 ANGLE & REVERSE FRAME 4" x 4" ALL REVERSE TO SHELTER DECK AFT & TO UPPER & SHELTER ALTERNATELY FORWARD
BULKHEAD FRAMES 4½" x 4" x 9/20 DOUBLE FRAMES SPACED 36" APART FROM ½L AFT TO ½L FORD END SPACING AS PER PROFILE
FOR PILLARING & STRENGTHENING IN MACHINERY SPACE SEE SEPARATE PLAN
STEM 13" x 3½" TO 2½" AT HEAD
8½" DIA. SOLID
WEB FRAMES 36" x 9/20
DOUBLE FACE BARS 4½" x 4"
DOUBLE FRAME BARS 4½" x 4"
STRINGER 36" x 9/20 FLANGED
FACE BAR 9½" x 4½" x 9/20
BRACKET 27" x 27" x 9/20
BRACKETS UNDER STRINGERS BETWEEN WEBS, WHERE WEBS ARE 4 FRAMES APART
SAME AS ABOVE
EVERY DOUBLE FRAME AT WEBS ONLY
R Q P O N M L K J H G F E D C B A
9½" T.R. D.R. AT ENDS
DOUBLE SHELL BARS 4" x 4" x 10/20
30'-0"
1' CLEARANCE
INNER BOTTOM SCANTLINGS APPLY THROUGHOUT THE SHIP. ENGINE SEAT WILL BE BUILT ABOVE INNER BOTTOM
INNER FLANGE OF CHANNEL SNIPED FROM 12" BELOW TOP OF BRACKET DOWN TO FOOT IF DESIRED.
CHANNEL 10" x 3½" x 3½" ON EVERY FRAME
MARGIN PLATE 64" x 15/20
BRACKETS TO BE 36" WIDE AT
18 - 7/8" RIVETS IN BRACKET & FRAME TO
17 AT AFT END
MARGIN BAR 6" x 6" x 14/20
MIDDLE STRAKE
REV. FRAMES
INNER BOTTOM PLATING
ALL SEAMS DOUBLE RIVETED
CENTRE GIRDER
9'-0"
OUTER KEEL PLATE 30" x 58/20
MIDDLE KEEL PLATE
INNER KEEL PLATE
BOTTOM FLAT FOR 20'-0" EACH SIDE IN MIDSHIP BODY
HYDRAULIC RIVETED
WING TANK

NOTE THESE SEAMS ARE TO BE QUAD. RIVD IN FORE & AFT BODIES FOR EXTENT SHEWN ON SHELL EXPANSION.

BUTT - RIVETING

KEEL PLATE BUTTS TREBLE RIVETED THROUGHOUT NO STRAPS IN WAY OF 3 THICKNESSES SINGLE STRAPS INSIDE AT ENDS

SHELL PLATING STRAKES A TO N INCLUSIVE TO HAVE DOUBLE STRAPS FOR ½L. OUTER STRAP DOUBLE RIVD INNER TR. RIVD AT ENDS TO HAVE QUADRUPLE TO TREBLE OVERLAPS

STRAKES O TO Y INCLUSIVE QUADRUPLE LAPS FOR ¾ LENGTH TO TREBLE AT ENDS.

STRAKES Z, A_2, B_2 & C_2 BOTH THICKNESSES IN WAY OF DOUBLE PLATING TO HAVE SINGLE STRAPS QUAD. RIVETED AT EACH BUTT. THE STRAPS TO EXTEND VERTICALLY TOP & BOTTOM ONE RIVET SPACE BEYOND THE EDGES OF THE PLATES WHICH ARE STRAPPED. (STRAPS TO BE 22/20 THICK of inner thickness) and 21/20 on outer thickness

BEYOND THE DOUBLED PLATING BUTTS TO BE QUADRUPLE LAPS

B DECK IN WAY OF DOUBLE PLATING ~~BUTTS TO HAVE DOUBLE STRAPS TREBLE RIVD FOR BOTH THICKNESSES~~ Top thickness to have double straps treble Rivt. Upper Straps 68 lower 64 Bottom thickness to have single straps treble Riveted ~~{UPPER STRAP 15/20 LOWER STRAP 13/20}~~

STRAKES 20-9/20 TO HAVE QUADRUPLE LAPS TO DOUBLE ~~AT AFT ENDS~~ at aft end

Strakes 18-19/20 " " " " " " " "

STRAKES 10-9/20 DOUBLE LAPS

C DECK STRINGER TO HAVE DOUBLE STRAPS AMIDSHIPS, QUAD RIVD ABOVE TREBLE RIVD BELOW, AT ENDS BUTTS TO BE QUADRUPLE TO TREBLE LAPS

TWO STRAKES NEXT TO STRINGER QUADRUPLE LAPS AMIDSHIPS TO TREBLE & DOUBLE LAPS AT ENDS

REMAINING STRAKES TREBLE LAPS AMIDSHIPS TO DOUBLE AT ENDS.

"D" DECK STRINGER QUADRUPLE LAPS AMIDSHIPS TO TREBLE AT ENDS

TWO STRAKES NEXT TO STRINGER QUADRUPLE LAPS AMIDSHIPS TO TREBLE & DOUBLE LAPS AT ENDS

REMAINING STRAKES TREBLE LAPS AMIDSHIPS TO DOUBLE AT ENDS

E F & G DECKS. STRINGER TREBLE LAPS THROUGHOUT

STRAKE NEXT STRINGER TREBLE LAPS AMIDSHIPS TO DOUBLE AT ENDS

REMAINING STRAKES DOUBLE LAPS FOR ½L. TO SINGLE AT ENDS

INNER BOTTOM CENTRE STRAKE QUADRUPLE LAPS THROUGHOUT

REMAINDER (INCLUDING MARGIN) QUADRUPLE LAPS AMIDSHIPS TO TREBLE AT ENDS

CENTRE GIRDER DOUBLE STRAPS TREBLE RIVD AMIDSHIPS TO QUADRUPLE LAPS AT ENDS.

NO STRAPS TO TOP & BOTTOM BARS

RIVETS THRO' FRAMES & SHELL TO BE NOT MORE THAN 6 DIAS. APART NOR LESS THAN 5½ DIAS. THROUGHOUT

SPACING OF RIVETS IN COAL BUNKER BULKHEADS WHICH ARE MADE TO TAKE OIL TO BE 3½ DIARS. APART CENTRE TO CENTRE AND AS PER SECTION 69, PAR. 10, OF RULES

SEAMS OF SIDE PLATING TO BE TREBLE RIVETED FOR ¾ LENGTH AMIDSHIPS, EXCEPT WHERE QUADRUPLE RIVD SEAMS ARE REQUIRED. DOUBLE AT ENDS

64-6
9
73-6
1-8

36
18

S.J. 31/1/12

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W/S 3450

J. BROWN & Co

No. 409.

MIDSHIP SECTION

"AQUITANIA"

CLS 34050.

PLAN No. 2

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LR-FAF-T818-P.4

Nº 409

MIDSHIP SECTION

SCALE 1/4" = 1 FOOT

John Brown & Company, Limited · Clydebank
Nº 26526
EXD BY
DATE 17 JAN 1912

SHEWING PROPOSED REDUCTION IN SCANTLINGS OF TOPSIDE PLATING, AND PLATING OF "B", "C" AND "D" DECKS.

NOTE:– THE SIZES OF RIVETS, BREADTHS OF LAPS, STRAPS AND LANDINGS WILL BE IN ACCORDANCE WITH THE RULES FOR THE REDUCED THICKNESS OF THE PLATING.

BUTT – RIVETING

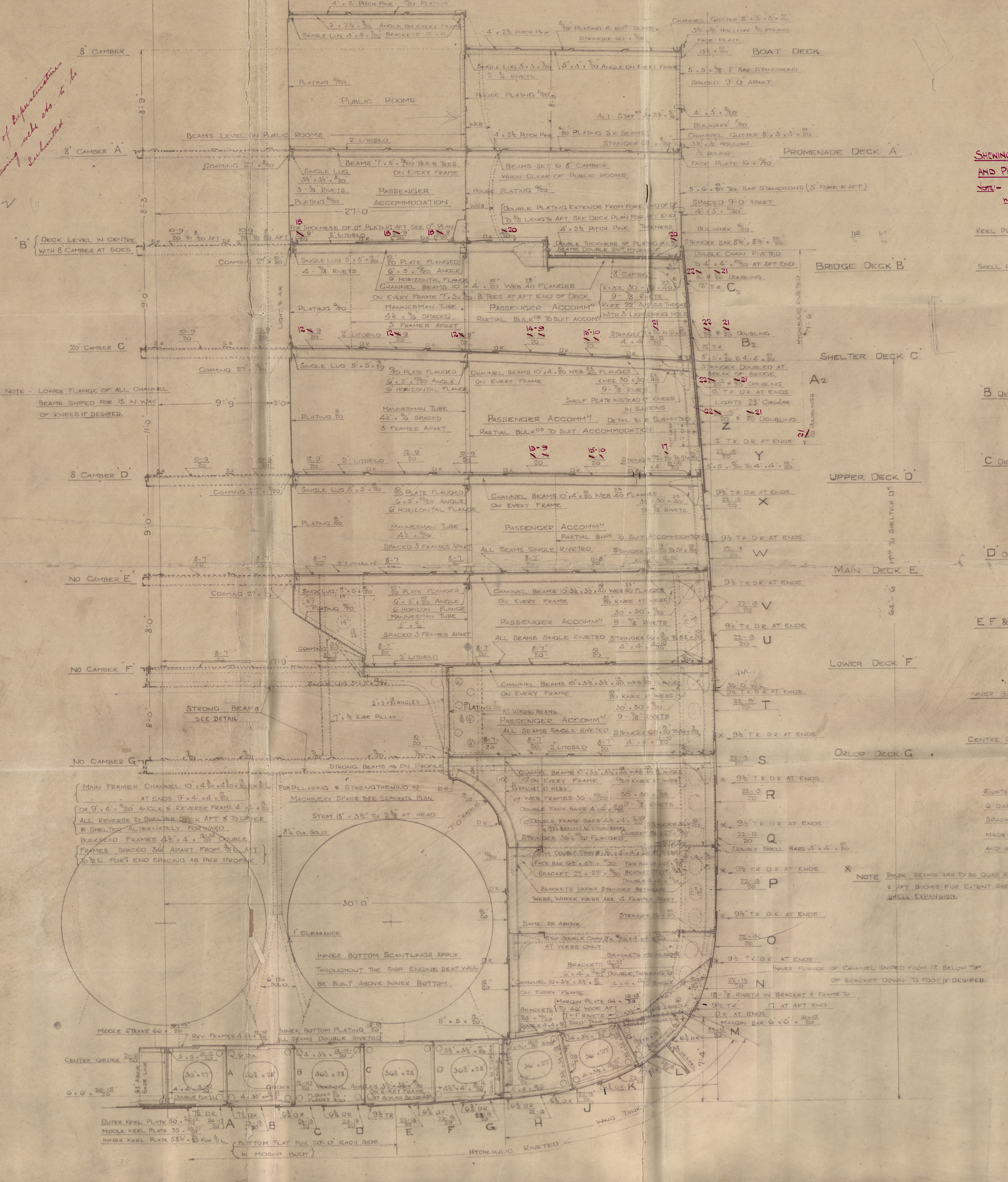
KEEL PLATE	BUTTS TREBLE RIVETED THROUGHOUT NO STRAPS IN WAY OF 3 THICKNESSES SINGLE STRAPS INSIDE AT ENDS
SHELL PLATING	STRAKES A TO N INCLUSIVE TO HAVE DOUBLE STRAPS FOR 1/2 L. OUTER STRAP DOUBLE RIVD INNER TR. RIVD AT ENDS TO HAVE QUADRUPLE TO TREBLE OVERLAPS STRAKES O TO Y INCLUSIVE QUADRUPLE LAPS FOR 3/4 LENGTH TREBLE AT ENDS STRAKES Z, A₂, B₂ & C₂ BOTH THICKNESSES IN WAY OF DOUBLE PLATING TO HAVE SINGLE STRAPS QUAD RIVETED AT EACH BUTT. THE STRAPS TO EXTEND VERTICALLY TOP & BOTTOM ONE RIVET SPACE, (STRAPS TO BE 24"/20 THICK) BEYOND THE EDGES OF THE PLATES WHICH ARE STRAPPED BEYOND THE DOUBLED PLATING BUTTS TO BE QUADRUPLE LAPS
B DECK	IN WAY OF DOUBLE PLATING, BUTTS TO HAVE DOUBLE STRAPS TREBLE RIVD FOR BOTH THICKNESSES { UPPER STRAP 15/20, LOWER STRAP 13/20 } STRAKES 20-9/20 TO HAVE QUADRUPLE LAPS TO DOUBLE AT AFT END STRAKES 10-9/20 DOUBLE LAPS
C DECK	STRINGER TO HAVE DOUBLE STRAPS AMIDSHIPS, QUAD RIVD ABOVE TREBLE RIVD BELOW, AT ENDS BUTTS TO BE QUADRUPLE TO TREBLE LAPS. TWO STRAKES NEXT TO STRINGER QUADRUPLE LAPS AMIDSHIPS, TO TREBLE & DOUBLE LAPS AT ENDS REMAINING STRAKES TREBLE LAPS AMIDSHIPS TO DOUBLE AT ENDS.
"D" DECK	STRINGER QUADRUPLE LAPS AMIDSHIPS TO TREBLE AT ENDS TWO STRAKES NEXT TO STRINGER QUADRUPLE LAPS AMIDSHIPS TO TREBLE & DOUBLE LAPS AT ENDS REMAINING STRAKES TREBLE LAPS AMIDSHIPS TO DOUBLE AT ENDS
E F & G DECKS	STRINGER TREBLE LAPS THROUGHOUT STRAKE NEXT STRINGER TREBLE LAPS AMIDSHIPS TO DOUBLE AT ENDS REMAINING STRAKES DOUBLE LAPS FOR 1/2 L. TO SINGLE AT ENDS
INNER BOTTOM	CENTRE STRAKE QUADRUPLE LAPS THROUGHOUT REMAINDER (INCLUDING MARGIN) QUADRUPLE LAPS AMIDSHIPS TO TREBLE AT ENDS
CENTRE GIRDER	DOUBLE STRAPS TREBLE RIVD AMIDSHIPS TO QUADRUPLE LAPS AT ENDS NO STRAPS TO TOP & BOTTOM BARS

RIVETS THRO FRAMES & SHELL TO BE NOT MORE THAN 6 DIAS APART NOR LESS THAN 5 1/2 DIAS. THROUGHOUT

SPACING OF RIVETS IN COAL BUNKER BULKHEADS WHICH ARE MADE TO TAKE OIL TO BE 3 1/2 DIARS APART CENTRE TO CENTRE AND AS PER SECTION 69 PAR. 10, OF RULES

SEAMS OF SIDE PLATING TO BE TREBLE RIVETED FOR 3/4 LENGTH AMIDSHIPS EXCEPT WHERE QUADRUPLE RIVD SEAMS ARE REQUIRED. DOUBLE AT ENDS

Sketches of Superstructures showing webs etc. to be submitted


8" CAMBER
BOAT DECK
PUBLIC ROOMS
BEAMS LEVEL IN PUBLIC ROOMS
8" CAMBER "A"
COAMING 27" × 8/20
PROMENADE DECK A
PASSENGER ACCOMMODATION
"B" { DECK LEVEL IN CENTRE WITH 8" CAMBER AT SIDES
COAMING 27" × 10/20
BRIDGE DECK B
LIGHT & AIR
PASSENGER ACCOMMN
PARTIAL BULKDS TO SUIT ACCOMMN
20" CAMBER C
COAMING 27" × 12/20
SHELTER DECK C
NOTE – LOWER FLANGE OF ALL CHANNEL BEAMS SNIPED FOR 15" IN WAY OF KNEES IF DESIRED.
9'-9"
2'-0"
8" CAMBER "D"
COAMING 27" × 12/20
UPPER DECK D
ALL SEAMS SINGLE RIVETED
NO CAMBER E
MAIN DECK E
NO CAMBER F
LOWER DECK F
STRONG BEAMS SEE DETAIL
7" × 1/2 TUBE PILLAR
5" × 3" × 10/20 ANGLES
NO CAMBER G
STRONG BEAMS AS ON PROFILE
ORLOP DECK G
MAIN FRAMES CHANNEL 10" × 4 3/20 × 4 3/20 × 12/20 FOR 3/4 L
" " AT ENDS 9" × 4" × 4" × 12/20
OR 9" × 4" × 12/20 ANGLE & REVERSE FRAME 4" × 1" × 12/20
ALL REVERSE TO SHELTER DECK AFT & TO UPPER & SHELTER ALTERNATELY FORWARD
BULKHEAD FRAMES 4 1/2" × 4" × 13-10/20 DOUBLE
FRAMES SPACED 36" APART FROM 3/5 L. AFT TO 1/2 L. FORD END SPACING AS PER PROFILE
FOR PILLARING & STRENGTHENING IN MACHINERY SPACE SEE SEPARATE PLAN
STEM 13" × 3 1/2" TO 2 5/8 AT HEAD
8 1/4" DIA. SOLID
7'-0" RADIUS
30'-0"
1" CLEARANCE
INNER BOTTOM SCANTLINGS APPLY THROUGHOUT THE SHIP ENGINE SEAT WALL BE BUILT ABOVE INNER BOTTOM
6" DIA. SOLID
MIDDLE STRAKE 66 × 16-14/20
REV. FRAMES 4 × 4 × 12-10/20
INNER BOTTOM PLATING 15-13/20
ALL SEAMS DOUBLE RIVETED
CENTRE GIRDER 21-15/20
6 1/2" ABOVE BASE LINE
6" × 6" × 20-15/20
30" × 27"
36 1/2" × 28"
VERTICAL ANGLES 3 1/2" × 3 1/2" × 10/20 ON EVERY FRAME
AT BOILER BEARERS
OUTER KEEL PLATE 50" × 23-17/20
MIDDLE KEEL PLATE 35" × 24-17/20
INNER KEEL PLATE 58 1/2" × 23/20 FOR 3/5 L.
BOTTOM FLAT FOR 20'-0" EACH SIDE IN MIDSHIP BODY
HYDRAULIC RIVETED
WING TANK
A B C D E F G H J K L M N O P Q R S T U V W X Y Z A2 B2 C2
9 1/2" T.R. D.R. AT ENDS
22-13/20
DOUBLE SHELL BARS 4" × 4" × 10/20
NOTE THESE SEAMS ARE TO BE QUAD. RIVD IN FORE & AFT BODIES FOR EXTENT SHEWN ON SHELL EXPANSION.
INNER FLANGE OF CHANNEL SNIPED FROM 12" BELOW TOP OF BRACKET DOWN TO FOOT IF DESIRED.
18 – 7/8 RIVETS IN BRACKET & FRAME TO 17 AT AFT END

Init. S.T.
31.1.12.

Lo 409. 62

P+C

General E.R. Arrangement

Sp "Aquitania"

GLASGOW REPORT No. 34050.

RETAIN

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PRIVATE AND CONFIDENTIAL.

PRIVATE AND CONFIDENTIAL.

Q. S. T. S. "AQUITANIA". Nº 409.

GENERAL ARRGT OF MACHINERY

amended plan.

J. Brown & Co Ld.

No 409. Boilers

W.P. 195 lbs.

LLOYD'S REGISTER OF SHIPPING
RECEIVED
17 JAN. 1911
LONDON

~~547~~

5.

RETAIN

Boiler A1
No 11529
Lloyds Test
390 lbs
H.C. 16.4.12

Boilers B1-C1
No 11544
Lloyds Test
390 lbs.
H.C. 8.5.12

D1. E1. F1
No 11664
Lloyds Test
390 lbs
JH. H. 9.7.12

A2. B2.
No 11430
Lloyds Test
390 lbs.
H.C 21.8.12

C2. D2. E2
No 11474
Lloyds Test
390 lbs.
H.C. 19.9.12

A3. B3. F2
No 11861
Lloyds Test
390 lbs.
H.C. 8.11.12

C3 D3. E3.
No 11922
Lloyds Test
390 lbs.
H.C. 24.12.12

A4. F3.
No 11956
Lloyds Test
390 lbs.
H.C. 28.1.13

C4. B4.
No 12032
Lloyds Test
390 lbs.
H.C. 14.3.13.

sp "Aquitania"

GLASGOW REPORT No. 34050.

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17/1/11

7'-10½"
Iron
Screwed 10 Threads per Inch.
Shell (Machine)
Shell (Hand) ¼ Machine
Shell in way of Furnaces (Hand)
Furnaces & Fireboxes Hand & Machine
Cross Seams Machine
Furnace Mouths and Fire Box Side Angle Stays Hand
Rivets 1⅝" Diam (Finished)
Opening 16" x 12"
Note. - See Arrangement for Position Of Manhole And Lifting Lugs.
1⅝" Rivets (Machine)
3⅛" Hole.
Lifting Lugs.
4 - Off Per Boiler.
Note. - To Be Angled In Fore And Aft Direction To Suit Angle Of Slings When Lifting Boiler.
1" Diam. Rivets 3⅜" Pitch (Machine) Flush Outside.
1⅛" Dia. Rivets (Machine) Finished
Riveted Over.
Mean Circ^E 671·024" = 176 Pitches @ 3·813"
Hand Riveted
Mean Circ^E = 661·01" = 136 Pitches @ 4·86"
Mean Circ^E 671·02" = 136 Pitches @ 4·934"
Machine Riveted.
Solid Steel Stays 2⅞" Dia^R Staved up at Ends to 3⅛" Dia^R in Hydraulic Press. & Screwed 8 Threads per Inch. Annealed all over After being Staved up.
Washers ¼" Thick.
22' - 0" Mean Length.
6' - 0"
2 - ¾" Plates
Stays 1⁹⁄₁₆" Dia^R Screwed 10 Thds per Inch (Netherton Iron)
2' - 8½"
7' - 10½" Between Tube Plates.
2 - ⅞" Rivets & Thimbles
724 Plain Tubes 2½" Ext. Dia. x 8 W. G. Thick.
80 Stay " 2½" " x ¼" " Marked A
92 " " 2½" " x ⁵⁄₁₆" " " B
168 " " 2½" " x ⅜" " " C
Total 1064 Tubes
Centre Firebox Plate
Wing Firebox Plate
17' - 8" Mean Dia^R.
Screwed 10 Threads per Inch (Netherton Iron) Both Ends.
Centre Firebox
Wing Firebox
Plate Flanged
Furnace Turned
Furnace Flange & Tube Plate Swaged to 7⅛" Round to Centre Line
Furnace 7'-8⅛" Overall
Template of Back End Flange to be Sent to Makers.
Morison Type Furnaces
Grate 5'-6" Long.
3'-9" Effective Diam.
Fireboxes to Rest on Angles But Not Fixed
¾" Bolts About 3" Pitch in Supports
¾" Screwed Pins About 4" Pitch in Boiler Shell
3"x3"x½" Angles
Steel Stays 2⁷⁄₁₆" Dia^R Staved up at Ends to 2¼" Dia^R in Hydraulic Press. & Screwed 8 Thds per Inch Annealed all over After Being Staved up.
7" x 3" x ½" Angles
¾" Bolts About 3" Pitch
¾" Screwed Pins About 4" Pitch in Boiler Shell
Fireboxes to Rest on Angles But not Fixed
7' - 8½"
4' - 2" Ext.L
Stays Marked ◎ 2¹⁄₁₆" Dia^R over Threads Screwed 10 Thr^DS per In. Thro' Both Plates And Nutted at Both Ends.
Inner Rows of Stays 1⅝" Dia^R over Threads (Netherton Iron) Screwed Thro' Both Plates 10 Thr^DS per In & Nutted Both Ends
Bounding Rows Marked ⊗ 1¹³⁄₁₆" Dia^R over Thr^DS (Netherton Iron) Screwed Thro' Both Plates 10 Thr^DS per In. and Nutted Both Ends
9¼"
7¾"
6½"

Shell Plates 1¹⁹⁄₃₂" thick Butt Straps 1⁷⁄₃₂" thick. Outside
Longitudinal Joint Plate = 84·52 % 1⁵⁄₁₆" " Inside.
Rivet = 86·2 % for Board of Trade
" 92·2 % " Lloyds
To Board of Trade & Lloyds' Requirements and
Tests for a Working Pressure of 195 lbs per □"
" " Test " 390 " " "
Steel throughout except Tubes which are of Iron
All Holes Drilled in Place after Bending
Tensile Strength of Shell Plates & Butt Straps
31 to 35 tons per sq inch.
Elongation to be not less than 20% in a length of 10"
All other Plates 26 to 30 tons per sq inch except
Girders which are 28 to 32 tons Tensile Strength
Plates Supplied by D. Colville & Sons Ltd Motherwell.
Firebox Screwed Stays of Netherton Iron having a Tensile Strength
of Not Less Than 21½ Tons with an Elongation of 20% in 10 Inches

Particulars	One Double End Boiler	21 Double Ended Boilers
Grate Surface	168·66□'	3541·8□'
Tube Heating Surface	5479·6□'	115,071·6□'
Furnace " "	405·6□'	8,517·6□'
Firebox " "	714·6□'	15,006·6□'
Total " "	6599·8□'	138,595·8□'
Area Thro' Tubes	25·117□'	527·457□'
Steam Space	1,231·7 cft	25865·7 cft

Heating Surface / Grate Area = 39·1 / 1

Grate Area / Area Thro' Tubes = 6·71 / 1

Steam Space / Grate Area = 7·3 / 1

Tube Surface / Grate Area = 32·48 / 1

John Brown & Company, Limited
Engineering Department
12 JAN. 1911
Clydebank

No. 409.

Main Boilers.

Scale 1" = 1 Foot.

21 - Off.

A.P.R.
17.1.11

17/1/11

~~32~~

J. Brown & Co 4.

No 409

Rudder. Stern Frame & Shaft Bracket

s/s "Aquitania"

GLASGOW REPORT No: 34050.

9 A

RETAIN

LLOYD'S REGISTER OF SHIPPING.
RECEIVED
26 JAN. 1912
LONDON.

J. Brown & Co.

No. 409.

Bending Moment Diagram.

London Office Copy

Plan No. 42

RETAIN

RETAIN

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Lloyd's Register
Foundation

LR-FAF-T818-P-12

Q.S. S. Nº 409

STRESS DIAGRAM

VESSEL ON CREST OF WAVE AT END OF VOYAGE.

HEIGHT OF WAVE $\frac{L}{20}$ = 43·25 FT

SCALES :- LONGITUDINAL SCALE $\frac{1}{16}$ INCH = 1 FOOT
WEIGHT, BUOYANCY & LOAD $\frac{1}{8}$ " = 1 TON
SHEARING FORCE $\frac{1}{8}$ " = 100 TONS
BENDING MOMENTS $\frac{1}{8}$ " = 10000 FT TONS

MAXIMUM BENDING MOMENT 1512722 FT TONS

DISPLACEMENT 42340 TONS

FACTOR $\frac{L \times \Delta}{B.M} = \frac{865' \times 42340}{1,512,722} = 24·22$

JOHN BROWN & COMPANY, LIMITED
SHIPBUILDING DEPARTMENT
Nº 26899
EXD BY JP
DATE 25 JAN 1912
CLYDEBANK

Aquitania

Load Δ = 51730 @ 35'4".

$\frac{865 \times 51730}{1,512,722} = 29.59$

865 × 68

$\frac{51730}{\cancel{42340}} \times 35 = .615$ ~~.49~~

863 × 96.5 × ~~36~~ 35.33